



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/584,248	05/31/2000	Annegret Janssen	96-082-1-US-01	3770

7590 02/06/2003
Carolyn A Fischer
H B Fuller Company
P O Box 64683
St paul, MN 55164-0683

EXAMINER

LORENZO, JERRY A

ART UNIT	PAPER NUMBER
----------	--------------

1734

DATE MAILED: 02/06/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/584,248

Applicant(s)

JANSSEN, ANNEGRET

Examiner

Jerry A. Lorengo

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2002 and 15 May 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6,10,15,16,19,21,23,26 and 37-100 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

- 5) ☐ Claim(s) _____ is/are allowed.

- 6) ☒ Claim(s) 1,6,10,15,16,19,21,23,26 and 37-100 is/are rejected.

- 7) ☐ Claim(s) _____ is/are objected to.

- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☒ Interview Summary (PTO-413) Paper No(s). 12.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

(1)

Withdrawal of Finality

In view of the supplemental amendment filed prior to the issuance of the office action mailed July 17, 2002, that office action, designated final, has been withdrawn.

(2)

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16, 82 and 86 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 68, from which claims 16, 82 and 86 depend, respectively, disclose that the substrate onto which the coating is applied is "a substantially non-porous substrate." Claims 16, 82 and 86, however, disclose that the substrate comprises or may comprise paper. It is not understood by the examiner how a substrate such as paper, given its absorptive and porous nature, can be considered "a substantially non-porous substrate." While applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947). The term "paper" in claim 16 is used by the claim to mean "a substantially non-porous substrate," while it is accepted that the generic term "paper" defines a material that is inherently porous.

(3)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

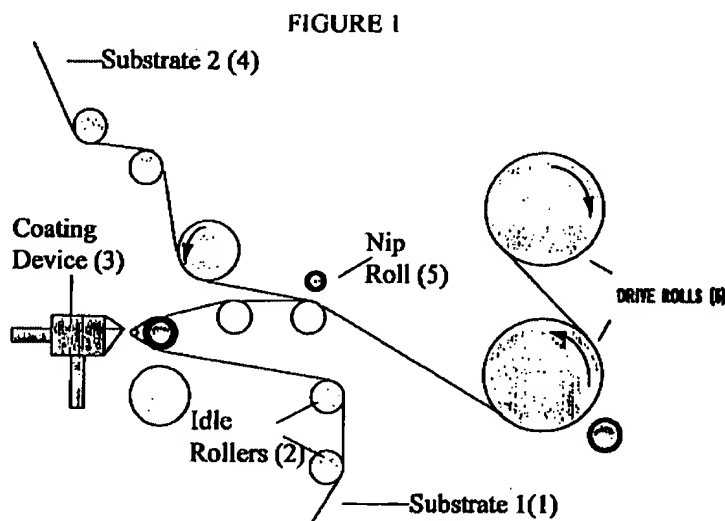
Art Unit: 1734

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 10, 15, 16, 19, 21, 23, 26, 37, 42, 43, 45, 46, 47, 49, 53, 54, 55, 56, 57, 62, 64, 65, 67, 68, 69-72, 74, 75, 76, 78, 79, 80, 81, 83, 84, 85, 86 and 87 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 96/25902 to Werenicz et al. in view of *Extrusion Coating & Laminating* by Mainstone.

Regarding applicant claims 1, 10, 37 and 68, Werenicz et al. disclose a method of coating wherein a thermoplastic material comprising a hot-melt adhesive (page 8, lines 24-30), which has been made thermally flowable (page 8, lines 29-30) is released from a coating device 3 (Figure 1) onto a substrate 1 (Figure 3) as a substantially continuous coating without contact between the coating device 3 and the substrate 1 and subsequently disposed on the surface of the substrate 1 (page 6, lines 7-11). The method of Werenicz et al. is illustrated below:



Art Unit: 1734

Werenicz et al., with regards to applicant claim 1, also disclose that the coating weight of the hot-melt adhesive (thermoplastic material) disposed upon the surface of the substrate 1 may be less than 10 g/m^2 wherein the coating material, as per applicant claim 10, has a complex viscosity less than about 500 poise at 1000 rad/sec at the coating temperature (page 8, lines 1-5), wherein, as per applicant claim 37, the coating device 3 is spaced from the substrate 1 at a distance of between 0.5mm and 20mm (page 6, lines 11-17) and wherein, as per applicant claim 68, the hot-melt adhesive comprises a thermoplastic polymer and a tackifying resin (page 10, lines 3-6).

Although Werenicz et al. do not specifically disclose, as per applicant claims 1, 10, 37 and 68, that the substrate comprises a nonporous or substantially nonporous substrate, it would have been obvious to one of ordinary skill in the art at the time of invention that the method of Werenicz et al. would have been applicable to both porous and non-porous substrates motivated by the fact that Mainstone, also drawn to methods of extrusion coating, discloses that it is well known in the art to utilize an extrusion coating device to coat both porous (woven and non-woven textile webs, etc.) and nonporous substrates (cellophane, biaxially oriented polyester and polypropylene films, nylon film, metal foils, polyethylene coated paperboard, etc.) in the formation of moisture vapor barriers, liquid barriers, gas transmission barriers, grease barriers, heat-sealing surfaces, surfaces with friction modification, variable light reflecting surfaces, and surfaces with transparency, opacity or scuff resistance (page 195, columns 1, 2 and 3).

Given the disclosure of Mainstone, it would have also been obvious to one of ordinary skill in the art at the time of invention that the substantially nonporous substrates could specifically comprise, as per applicant claims 16 and 56, films or foils.

As per applicant claims 19, 21 and 26, Werenicz et al. disclose that the coating device 3 comprises a slot nozzle (page 6, lines 1-2), which is capable of providing a coating having a coating weight of less than 30 g/m^2 (page 8, lines 1-5). They also disclose that the coating device 3 is spaced from the substrate 1 at a distance of between 0.5 and 20mm (page 6, lines 11-17).

As per applicant claims 15 and 23, Werenicz et al. disclose that the complex viscosity of the hot-melt thermoplastic coating is less than between 100 and 1000 poise at 1 rad/sec at a coating temperature of less than 125° (page 4, lines 11-20).

As per applicant claims 45, 47, 49, 57, 64, 65, 72, 74, 75, and 76, Werenicz et al. disclose that the first substrate 1 and the coating are contacted with a second substrate 2 and nipped between a first and second roller 5 (Figure 1).

As per applicant claims 53, 54, 55, 67, 69, 70 and 71, Werenicz et al. disclose that the hot-melt coating, in addition to its thermoplastic and tackifying resin components, may further comprise a plasticizer and may be applied at coating weights of less than 20 or 10 g/m² (page 10, lines 3-6; page 8, lines 1-5).

As per applicant claims 46, 62, 78, 79, 80, 83 and 84, Werenicz et al. and Mainstone disclose that the first and second substrate materials may comprise both porous webs (woven and non-woven textile webs, tissue, elastomeric strands or webs, etc.) and nonporous substrate webs (cellophane, biaxially oriented polyester and polypropylene films, nylon film, metal foils, polyethylene coated paperboard, etc.) (page 7, lines 18-29 of Werenicz et al. and page 195, columns 1, 2 and 3 of Mainstone).

With regards to applicant claims 86 and 87, Mainstone discloses that the substrates can be printed prior to extrusion coating and may also comprise transparent films such as cellophane (page 196, column 3, page 195, column 2).

With regards to applicant claims 81 and 85, although neither Werenicz et al. nor Mainstone specifically disclose a substrate may comprise metallized films or sheets instead of a webs, the skilled artisan would have been appreciative that the substrates could comprise sheet materials motivated by the fact that continuous feeding of sheet substrates to coating operations is well known in the art. The skilled artisan would have also appreciated that metallized films (papers or plastics sputter or vacuum coated with metal films) could have been used in the invention resulting from the combination of references motivated by the fact that such films are commonly used in the packaging industry.

Werenicz et al. and Mainstone disclose a method of releasing a hot-melt adhesive, that has been made thermally flowable, from a coating device in the form of a substantially continuous film without contact between the coating device 3 and a substantially nonporous moving substrate web 1 to form a coating on the substrate web 1 having a coating weight of not more than 30 g/m² and most preferably less than 10 g/m². They do not, however, specifically

Art Unit: 1734

disclose, as per applicant claims 42 and 43, that the coated substrate is essentially free of entrapped air between the coating and the substrate 1.

Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention that the interface between the coating and the substrate 1 of Werenicz et al. would have been essentially free of entrapped air motivated by the fact that the skilled artisan would have appreciated that the nip roll 5 (Figure 1) provided by Werenicz et al. would have been capable of providing an air-free interface and furthermore by the fact that nip rolls are commonly utilized, as opposed to platen presses, to ensure bonding between lamina while, at the same time, providing for the exclusion of air through the squeezing action of the nip and the laminae move therethrough.

(4)

Claims 38-41, 51, 73 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as combined in section (3), above, in further view of U.S. Patent No. 3,402,086 to Smith et al.

Werenicz et al. and Mainstone, as combined in section (3), above, disclose a method of releasing a hot-melt adhesive, that has been made thermally flowable, from a coating device in the form of a substantially continuous film without contact between the coating device 3 and a substantially nonporous moving substrate web 1 to form a coating on the substrate web 1 having a coating weight, as per applicant claims 40 and 41, of preferably less than 10 g/m² wherein the interface between the coating and the substrate 1, as per applicant claim 39, is essentially free of entrapped air. They do not, however, specifically disclose, as per applicant claims 38, 51 or 73, that the exposed surface of the coated substrate 1 is contacted with a roller.

Nonetheless, it would have been obvious to do so motivated by the fact that Smith et al., also drawn to methods of applying extrusion coated hot-melt adherents onto a substantially nonporous (foil) moving web 1, disclose that it is known to contact the exposed surface of the substantially continuous film 8 of hot-melt adhesive with a roller 10 immediately after the film 8 contacts the web 1 in order to attenuate the firmly cohered web to the substrate (Figure 1; column 1, lines 10-21; column 2, line 72; column 3, lines 1-12).

(5)

Claims 48, 50, 52, 58-61, 66 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as combined in section (3), above, in further view of WO 96/40480 to Enlow et al.

Werenicz et al. and Mainstone, as combined in section (3), above, disclose a method of releasing a hot-melt adhesive, that has been made thermally flowable, from a coating device in the form of a substantially continuous film without contact between the coating device 3 and a substantially nonporous moving substrate web 1 to form a coating on the substrate web 1 which is subsequently contacted with a second substrate 2 and pressed between a 1st and 2nd roller forming a nip 5. Werenicz et al. and Mainstone also disclose, as per applicant claims 59, 60 and 61, that the first and second-substrate materials may comprise both porous webs (woven and non-woven textile webs, tissue, elastomeric strands or webs, etc.) and nonporous substrate webs (cellophane, biaxially oriented polyester and polypropylene films, nylon film, metal foils, polyethylene coated paperboard, etc.) (page 7, lines 18-29 of Werenicz et al. and page 195, columns 1, 2 and 3 of Mainstone).

Although the do not specifically disclose, as per applicant claims 50, 52, 58 and 77, that the 1st and 2nd substrates are simultaneously contacted with the continuous film and nipped between a 1st and 2nd roller, it would have been obvious to one of ordinary skill in the art at the time of invention to do so motivated by the fact that Enlow et al., also drawn to methods of coating of continuous webs with extruded coatings, discloses that such is known in the art (Figure 12). Enlow et al.; with regards to applicant claims 48 and 66, also discloses that a nipped coating may be further contacted with a second substrate (Figure 12).

(6)

Claims 44, 63 and 88-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as combined in section (3), above, in further view of U.S. Patent No. 5,747,107 to Bayer, Jr. et al.

Werenicz et al. and Mainstone, as combined in section (3), above, disclose a method of releasing a hot-melt adhesive, that has been made thermally flowable, from a coating device in the form of a substantially continuous film without contact between the coating device 3 and a substantially nonporous moving substrate web 1 to form a coating on the substrate web 1 which,

Art Unit: 1734

as per applicant claim 91, is subsequently contacted with a second substrate 2 and, as per applicant claim 89, pressed between a 1st and 2nd roller forming a nip 5. Werenicz et al. and Mainstone also disclose, as per applicant claims 90 and 92-100, that the first and second substrate materials may comprise both porous webs (woven and non-woven textile webs, tissue, elastomeric strands or webs, etc.) and nonporous substrate webs (cellophane, biaxially oriented polyester and polypropylene films, nylon film, metal foils, polyethylene coated paperboard, etc.) (page 7, lines 18-29 of Werenicz et al. and page 195, columns 1, 2 and 3 of Mainstone), metallized films or sheets instead of webs. Mainstone discloses that the substrates can be printed prior to extrusion coating and may also comprise transparent films such as cellophane (page 196, column 3, page 195, column 2).

Although neither Werenicz et al. nor Mainstone specifically disclose, as per applicant claims 44, 63 and 88, that the continuous film, after extruding, is coated onto a non-porous support comprising a release coated roller prior to contact with a substrate web, it would have been obvious to one of ordinary skill in the art at the time of invention to do so motivated by the fact that Bayer, Jr. et al., also drawn to method for the application of extruded films onto substrate webs, discloses that it is known to use a release coated roller disposed between the extruder and a substrate web to be coated and furthermore discloses that such as roller allows for the shear thinning of the extruded coating, a factor which allows for relaxation and molecular reorientation of the hot-melt polymeric material without causing ribbing or breaking of the coating layer (Figure 1; abstract).

(7)

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,747,107 to Bayer, Jr. et al. in view of WO 96/40480 to Enlow et al.

Bayer, Jr. et al. disclose a method of coating wherein a hot melt polymeric adhesive coating 11,13, made thermally flowable, is released from a coating device 14 onto a release coated substrate (application roller) 26 as a substantially continuous coating (film) without contact between the coating device 14 and the surface 24 of the substrate 26 (Figure 1; abstract) and wherein the release coating on the application roller 26 (page 8, lines 19-22) facilitates the transfer of the coating from the surface 24 of the substrate 26 to a second substrate (paper) 30 (Figure 1; abstract; page 4, lines 13-17; page 9, lines 5-12).

Art Unit: 1734

Although Bayer, Jr. et al. do not specifically disclose that the release coated substrate comprises a web, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize a release coated web in place of the release coated roller of Bayer, Jr. et al. motivated by the fact that Enlow et al., also drawn to methods for coating extruded thermoplastic materials, disclose that it is known to coat an extruded thermoplastic coating onto a release coated web from which the coating is then transfer coated onto a second substrate (Figures 1, 3; abstract; page 8, lines 21-22) and furthermore by the fact that the skilled artisan would have appreciated the fact that release coated carriers in the form of continuous belts, webs and rollers are well known functional expedients within the transfer arts.

(8)

Election/Restrictions

Applicant's election without traverse of Group II, claims 1, 6, 10, 15, 16, 19, 21, 23, and 26 in Paper No. 7 is acknowledged.

(9)

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

(10)

Response to Amendments and Arguments

The amendments filed April 29, 2002 and May 15, 2002 have necessitated a new grounds of rejection as set forth in sections (2) - (7), above. Applicant's arguments with respect to art rejections of original claims 1, 6, 10, 15, 16, 19, 21, 23 and 26 have been considered but are moot in view of the new ground(s) of rejection. The applicant arguments with respect to the rejection of claim 16 (also applicable to newly added claims 82 and 86) under the second paragraph of 35 U.S.C. § 112 have been considered but are not persuasive. The Applicant argues that because "the Applicants [sic] have characterized paper as being within the group of nonporous substrates,"¹ the rejection should be withdrawn. The examiner respectfully disagrees. As stated in section (2), above:

¹ Applicant's remarks at page 4, 2nd full paragraph.

Art Unit: 1734

. . . While applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947). The term "paper" in claim 16 is used by the claim to mean "a substantially non-porous substrate," while it is accepted that the generic term "paper" defines a material that is inherently porous.

Claim 16, and newly added claims 82 and 86, therefore, stand rejected as set forth in the first office action mailed January 17, 2001 and as reiterated in section (2), above.

(11)

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Applicant is encouraged to **FAX After Final Amendments** (37 CFR 1.116) to expedite delivery to the Examiner. The Group 1734 Facsimile number is (703) 872-9311. A duplicate mailed copy of the facsimile transmission is **not required** and will only serve to delay the processing of your application.

If the applicant prefers to mail in After Final correspondence it is highly recommended that such be mailed to **BOX AF** which will also facilitate processing from the mailroom and within Group 1700.

(12)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry A. Lorengo whose telephone number is (703) 306-9172. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M.

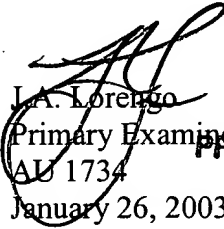
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7115 for regular communications and (703) 305-3599 for After Final communications.

Application/Control Number: 09/584,248

Page 11

Art Unit: 1734

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


J.A. Lorengo
Primary Examiner
AU 1734
January 26, 2003

J.A. LORENZO
PRIMARY EXAMINER